Epitomes

Important Advances in Clinical Medicine

General and Family Practice

The Scientific Board of the California Medical Association presents the following inventory of items of progress in general and family practice. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome, and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist busy practitioners, students, researchers, or scholars to stay abreast of these items of progress in general and family practice that have recently achieved a substantial degree of authoritative acceptance, whether in their own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on General and Family Practice of the California Medical Association, and the summaries were prepared under its direction.

New Guidelines to Prevent Atherosclerosis

ATHEROSCLEROTIC DISEASE is responsible for about 700,000 deaths per year in the United States, with the majority resulting from ischemic heart disease. The National High Blood Pressure Education Program created in 1973 and the series of Surgeon General's reports on smoking issued since 1964 have raised public and professional awareness of the importance of these two particular risk factors. In a similar vein, the National Cholesterol Education Program (NCEP) was launched in 1987 with guidelines for the detection, evaluation, and treatment of hyperlipidemia. To cause a continued decline in cardiovascular mortality, the program recommends that all adults aged 20 years and older should have their total cholesterol levels measured at least once every five years. Although controversy exists about whether overall mortality is reduced by cholesterol reduction, there is a general consensus that control of this risk factor is beneficial.

Total cholesterol levels can be measured in a nonfasting person with further follow-up, including cholesterol fractionation, dependent on the total blood cholesterol level and the existence of other risk factors. Desirable blood cholesterol levels are less than 5.17 mmol per liter (200 mg per dl). Persons with cholesterol levels in the range of 5.17 to 6.18 mmol per liter (200 to 239 mg per dl) are designated as borderline high, and those with levels greater than 6.21 mmol per liter (240 mg per dl) are at high risk. Because of individual variation and laboratory inaccuracy, elevated cholesterol levels should be rechecked within eight weeks. If this level is within 0.78 mmol per liter (30 mg per dl) of the first, the average of the two levels should be used. If the second measurement is outside of this range, then a third test should be done. The average of these three becomes the patient's cholesterol level. Lipid measurements within three months of a major illness are not considered to be clinically relevant.

A careful history and physical can help detect secondary (and possibly reversible) causes of high-risk hyperlipidemias such as hypothyroidism, nephrotic syndrome, diabetes mellitus, obstructive liver disease, and cholesterol-elevating drugs, particularly progestins and anabolic steroids.

A person in the borderline-high group who has definite coronary artery disease or two risk factors, including male sex, family history of coronary artery disease, diabetes mellitus, obesity, cigarette smoking, hypertension, or a low high-density-lipoprotein (HDL) level—less than 0.91 mmol per liter (35 mg per dl)—should be considered at high risk, and decisions regarding treatment should be based on a fasting lipoprotein analysis that measures actual levels of low-density lipoproteins (LDLs) and HDL levels. Using these cutoff points, 25% of the adult population will have a cholesterol level in the high range (total cholesterol greater than 6.21 mmol per liter or LDL level greater than 4.13 mmol per liter [160 mg per dl]).

Dietary therapy using the American Heart Association (AHA) step I diet consists of 30% or less of calories from fat, including less than 10% of total calories from saturated fatty acids, and a cholesterol intake of less than 7.76 mmol per liter (300 mg per dl). If three months on this regimen does not lower cholesterol levels adequately, the AHA step II diet should be considered, which further reduces saturated fats to less than 7% of total calories and cholesterol to less than 200 mg per day. If these persons are unable to bring their level into a normal range despite six months of dietary therapy, then drug therapy should be considered.

With the aggressive reduction of cholesterol levels, there is a potential not only to halt atherosclerotic lesion formation but also to possibly regress the size of existing plaques.

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REFERENCES

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Expert Panel: Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Arch Intern Med 1988; 148:36-69

New Guidelines for Tuberculin Skin Test Interpretation

UNTIL 1983, the incidence of active tuberculosis in the United States had been decreasing steadily. Since then it has been increasing. Today a high incidence is reported among recent immigrants from the third world; other ethnic minority populations, especially African Americans, Hispanics, and Native Americans; those infected with the human im-